School-to-Work
Baseline Performance Measures

Systems Building in the Eight Implementation States
1994–95

A Report to the U.S. Department of Education, Planning and Evaluation Service

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INTRODUCTION

The School-To-Work Opportunities Act of 1994 (STWO Act) seeks to establish comprehensive, statewide school-to-work transition systems. Title IV, Section 402 of the Act calls for developing performance measures to assess state and local progress toward creating these systems and to monitor student and employer participation and outcomes. In collaboration with the states, the Secretaries of Education and Labor took steps during 1994–95 to design a performance measurement system that provides information on the following areas identified in the Act:

- progress in the development and implementation of state plans, including school-based, work-based, and connecting activities program components;
- participation in STWO Act programs by employers, schools, students, and school dropouts, including information on the demographic characteristics of student participants;
- progress in developing and implementing strategies for addressing the needs of students and school dropouts;
- progress in meeting the goals of the states to ensure opportunities for young women to participate in STWO Act programs, including participation in nontraditional employment;
- outcomes for participating students and school dropouts across a variety of demographic characteristics, including information on:

  -academic learning gains

  -staying in school and attaining (1) a high school or a general equivalency diploma, (2) a skill certificate, and (3) a postsecondary degree

  -attaining strong experience in and understanding of all aspects of the industry students are preparing to enter

  -placement and retention in further education or training, particularly in the career major of the student

-job placement, retention, and earnings, particularly in the career major of the student; and

- the extent to which the program has met the needs of employers.

Design Considerations

The performance measurement system that serves as the basis for this report was the product of a substantial collaborative effort among the eight states receiving STWO implementation grants during 1994–95, the National School-to-Work Office, and an advisory task force that included representation from the Departments of Labor and Education and the Office of Management and Budget.[1]

> *The performance measurement system is designed to serve two primary purposes: (1) providing national audiences with information on the progress and success of the federal STWO initiative; and (2) providing states with information useful for managing and improving their STWO systems. As such, the performance measurement system is intended to reflect state information needs as well as national reporting objectives.*

During 1995–96 as the STWO initiative expands beyond the eight initial states to encompass 27 states, considerable discussion and deliberation will be required to identify a core set of STWO goals or benchmarks. Identification of these goals will ensure that performance measurement efforts during 1995–96 and beyond address state information needs. However, it may be unrealistic to expect that federal and state information needs will overlap precisely, and all states may not have identical performance measurement concerns. Consequently, when developing the STWO performance measurement system over the next couple of years it may be necessary to identify a core of federal measures, while allowing states to augment that core with data they deem useful for their unique program improvement purposes.

In addition to the critical question of purpose, several other issues were fundamental to designing the STWO performance measurement system:

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[1]Two earlier papers were prepared for the advisory task force. See Karen Levesque and Elliott A. Medrich, "Designing a System of Performance Measures for School-To-Work" and "Program Objectives and Proposed Performance Measures: School-To-Work State Implementation Grant Recipients", prepared for the School-To-Work Office and the Departments of Education and Labor, January 17, 1995.

- *Phasing in performance measures*. The eight state grantees and federal STWO representatives agreed that because of the timing of implementation efforts, first-year performance measures should focus on capturing state-level system-building activities. In addition to these *system-building* data, this report also provides a baseline description of student and employer *participation* and student *outcomes* based on existing state education and training systems. These participation and outcome data provide the background against which progress in implementing STWO systems may be compared in future years. Data on existing programs will be replaced in 1995–96 and beyond with data on participation in and outcomes of key STWO activities. Because local partnerships were only beginning to be formed during 1994–95, it was not possible during this first year to collect meaningful data on participation in and outcomes of local STWO activities. However, performance measures for 1995–96 and beyond will provide this information.

- *Comparability*. Data collection and management information capacities differ substantially from state to state. When designing the performance measurement system, it was necessary to recognize that while states may collect data on particular issues of interest, the data may not be comparable from state to state.[2] While efforts were made to elicit similar performance data, state agencies generally provided available data that they already maintained for other purposes. First-year performance measurement efforts were aimed in part at assessing the degree to which data were comparable across the eight initial implementation states.

What the Report Covers

The report describes findings from the eight states that received STWO implementation grants in 1994–95: Kentucky, Maine, Massachusetts, Michigan, New Jersey, New York, Oregon, and Wisconsin. As mentioned above, the report provides data on state-level *system-building* activities, as well as baseline data on student and employer *participation* and student *outcomes* based on existing state education and training systems. Data on existing programs will be replaced in 1995–96 and beyond with data on participation in and outcomes of key STWO activities.

[2]For example, while states may assess the academic achievement of their students, they generally do so using different assessment instruments. As another example, states use different methods to count student enrollments in vocational education. States that tally enrollments in consumer and homemaking education and industrial arts (technology education) courses as well as in introductory and more advanced occupationally specific courses will have much higher vocational education enrollment counts than states that count only those students in more advanced occupationally specific courses.

A product of substantial collaboration among state and federal representatives, the performance measurement system was designed to phase in information as STWO systems take root and data become available. First-year performance measurement efforts focused on providing the following information:

I. System Building

A.extent of state agency collaboration

B.status of selected state-level implementation activities[3]

C.investments of funds and other resources

II. Baseline Participation

A.description of existing workforce preparedness programs

B.student participation in existing workforce preparedness programs

C.employer participation in STWO system building

II. Baseline Student Outcomes

A.capacity of states to collect information on the outcomes identified in the Act

The first section of the report explores state-level system-building activities undertaken during 1994–95, including state investment in school-to-work. The second section of the report describes current education and training systems, which form the backdrop for STWO reforms, including the numbers and types of education and training providers in the eight initial implementation states. It also provides baseline data on student participation in existing workforce preparedness programs and on employer participation in state-level system-building activities. The third section describes results of an inventory of statewide student outcomes data that are already maintained by the eight states. While describing the first-year data that were obtained, these three sections also highlight the challenges states may face in implementing their STWO systems and for future data collection. A concluding discussion section identifies key issues that require further attention.

[3]Includes school-based, work-based, and connecting activities program components and strategies for addressing the needs of students and school dropouts and for ensuring opportunities for young women to participate in STWO ACT programs, among other state-level strategies.

What the Report Does Not Cover

Because local partnerships were only beginning to be formed during 1994–95, first-year performance measurement data do not provide information on the participation of schools, employers, and other entities in local partnerships, nor on the participation of students in local partnership activities. These data will be collected starting in 1995–96. Similarly, data on outcomes for participants in local partnerships are not yet available and will be phased in at some time in the future. Over the course of the next several years, however, all of the measurement areas identified in Section 402 of the Act will be addressed by the STWO performance measurement system, although only modest efforts will be made to collect data on "the extent to which the program has met the needs of employers." Additional information in this area will be gathered through a separate data collection strategy, primarily involving the STWO national evaluation, and the Employment Quality of the Workforce (EQW) National Employer Survey.

The STWO performance measurement system does not evaluate the success or failure of particular reforms, nor is it capable of generating uniform national estimates. In the first case, the STWO performance measurement system provides descriptive information and is not designed to control for various non-program effects. In the second case, the system is based on state-generated data. While efforts to develop the system produced a set of common performance measures, the resulting state data vary widely in their availability, definitions, and particular data collection practices. (Important differences in data elements across the eight initial implementation states are identified in the body of this report.) The STWO Act provides neither the mandate nor the resources to design a new, uniform data collection system for STWO, such as exists for Job Training Partnership Act (JTPA) programs. The objectives of isolating the impact of particular STWO activities and generating reliable national estimates are better achieved through other methods, namely rigorous evaluations and national statistical surveys.[4]

[4]See E. Gareth Hoachlander and Karen A. Levesque, *Improving National Data for Vocational Education: Strengthening a Multiform System* (Berkeley: University of California, National Center for Research in Vocational Education, 1993).

I. SYSTEM BUILDING

A primary objective of the 1994 STWO Act is to provide a framework for states to establish comprehensive, statewide school-to-work transition systems. Rather than creating a new federal "program" to stand alongside many others, the Act seeks to promote the building of a "system" that will be a part of comprehensive education reform efforts, will be integrated with other federal initiatives, and will eliminate duplication in education and training programs for youths. First-year STWO performance measurement data provide evidence of state-level system-building activities including information on state agency collaboration, the status of implementation activities, and federal and state investments in school-to-work. (A list of the system-building performance measures collected is on page 7.)

State STWO offices provided the data reported in this section. Data on system-building collaboration and implementation is self-reported, based on subjective rating scales (see footnotes). Efforts were made to utilize scales that were reasonably precise—to create a common metric. The nature of state responses appears to reflect careful, conservative ratings of current status. However, because of their subjective character, the results should be viewed with some caution.

I.A. SYSTEM BUILDING: STATE AGENCY COLLABORATION

The Extent of Involvement

An important step in creating a comprehensive, statewide school-to-work transition system is bringing together a wide variety of state-level actors. The 1994 STWO Act identified 10 state agencies (including the Governor's office) as possible collaborators.

> *Surpassing legislative guidelines, the first eight state implementation grantees reported, on average, involving 18 agencies in state-level system-building activities during 1994–95.*[5]

[5]In a few cases, states reported that a single agency encompassed two or more functions. For example, in four states, the job training and employment functions were covered by a single agency. For purposes of comparability, each function was counted separately.

Table 1

SYSTEM BUILDING PERFORMANCE MEASURES: 1994–95

(1) Average number of agencies collaborating on system-building activities at the state level

(2) Average level of participation in system-building activities at the state level, by agency type

(3) Average stage of implementation of selected state-level coordination activities, efforts to support local activities, and efforts to promote access and participation

(4) Average stage of implementation of state-level efforts to support school-based learning, work-based learning, and connecting activities at the local level

(5) Total amount of funds invested by the state grantees in STWO activities, including new and redirected funds and in-kind contributions

(6) Average leveraging factor comparing state and federal investments

The number of agencies collaborating in the different states ranged from 15 to 21. The most active participants and contributors included the state STWO office and the following 5 state agencies: vocational education, employment, job training, public K–12 education, and public 2-year college. In those states that had public technical college agencies, these agencies were also among the most active.

Entities that states reported as moderately active included vocational rehabilitation and economic development agencies, governors' offices, JTPA human resource investment councils, State Councils on Vocational Education, State Occupational Information Coordinating Committees, representatives of organized labor, and public four-year college

agencies. The least active entities included community-based organizations, human services agencies, and corrections agencies.[6]

Table 2

Ranking of Agency Participation in State-Level System Building Activities During 1994–95	
State Agency or Other Organization	**Average Ranking***
STWO Office	3.0
Vocational Education Agency	3.0
K–12 Education Agency	2.9
Job Training Agency	2.9
Employment Agency	2.9
2-year College Agency	2.8
Vocational Rehabilitation Agency	2.5
Governor's Office	2.4
Economic Development Agency	2.3
JTPA Human Resource Investment Council	2.2
4-year College Agency	2.1
Organized Labor Representatives	2.1
Council of Vocational Education	2.0
Occupational Information Coordinating Committee	1.9
Community Based Organizations	1.6
Human Services Agency	1.3
Juvenile Corrections	0.9
Adult Corrections	0.0

*A 3-point scale was used to measure participation with 3.0 equivalent to "regular" participation, 2.0 equivalent to "occasional" participation, 1.0 equivalent to "minimal" participation, and 0.0 equivalent to "no" participation.

The agencies that were most active in system building during 1994–95 included current providers of work-focused education and training (such as vocational education and job training) as well as representatives of the education system from kindergarten through

[6]While three states reported participation by juvenile corrections officials, none reported involvement of adult corrections representatives.

"grade" 14. These agencies represent essential building blocks of a comprehensive school-to-work transition system.[7] However, given the STWO Act's emphasis on serving all students—including both academically talented and disadvantaged students—and on preparing students for both work and college (including 4-year college or university) the lesser involvement of public four-year college agencies in initial system-building activities raises some questions about the strategies states will employ to achieve these objectives. However, it should be remembered that those agencies that were only moderately or slightly active during 1994–95 may become important actors in developing and implementing state STWO systems in future years.

The Nature of Involvement

Collaborating agencies participated in a range of system-building activities during 1994–95. As the lead agency, the STWO office typically coordinated interagency efforts and was responsible for awarding STWO funds to local partnerships, overseeing local STWO activities, providing local technical assistance, and conducting workshops and conferences, among other activities. In contrast, the nature of vocational education agency participation varied across the states. In a couple of cases, this agency was virtually synonymous with the state STWO office, taking the lead on the STWO initiative. In other cases, the vocational education agency supported STWO efforts by participating in the local partnership grant review process, providing staff development for educators and business leaders, or participating in other specific activities. In still other cases, this agency provided indirect support by expanding its administrative policies to allow local programs to spend state vocational education funds on STWO components.

State employment and job training agencies served on a variety of state-level STWO committees and work groups. They also typically helped to coordinate STWO activities at the local level by participating on regional employment boards or labor market councils. An additional role these agencies played was to recruit employers. In some cases, employment and job training agencies also provided legal and management information system support.

The public K–12 education agency typically was responsible for coordinating STWO activities with other education reform efforts. The agency also provided technical assistance and staff development to schools, particularly in the area of work-based learning. In some cases, the K–12 agency incorporated workforce preparation skills into its state curriculum

[7]Participation of employers will be discussed separately in a following section.

frameworks. For their part, the public 2-year and technical college agencies participated in state-level planning, development, and implementation activities, including the local partnership grant review process. In some cases, these agencies provided technical assistance on school-based learning and program evaluation and disseminated information among college educators.

I.B. SYSTEM BUILDING: STATUS OF IMPLEMENTATION ACTIVITIES

First-year performance measurement data also provide information on the progress that state grantees made toward implementing various STWO objectives during 1994–95. States were asked to rank a number of activities on the following 5-point scale: 1.0 not yet begun; 2.0 planning; 3.0 development; 4.0 initial implementation; and 5.0 advanced implementation or "institutionalization."

Status of State Implementation Strategies

States were asked first about the following three categories of activities: state-level coordination, supporting local activities, and promoting access and participation.

> *On average, states had developed plans and field-tested ideas and were on their way toward implementation in the areas of state-level coordination, supporting local activities, and promoting access and participation. State-level coordination activities were slightly further along toward implementation than were state efforts to support local STWO activities. Efforts to provide assistance to local partnerships to promote access and participation of various populations were furthest away from being implemented.*

Given limited time and resources, it is reasonable to expect that states need to set priorities among the many activities they must undertake to establish STWO systems. Performance data for 1994–95 indicate that state-level coordination received the earliest attention. Specific activities varied in terms of their average implementation status, and are described on page 11.

Table 3

Implementation Strategies: 1994–95	
Strategy	**Rating***
1. State-level coordination, total	**3.7**
Convening state planning board	4.1
Convening regional planning boards	4.0
Coordinating with other school reform efforts	3.8
Coordinating with existing workforce preparedness programs	3.6
Coordinating with *Goals 2000* activities	3.1
2. Supporting local activities, total	**3.6**
Forming local partnerships	4.1
Stimulating and supporting local STWO activities	4.1
Promoting participation of unions and other employee groups	3.9
Disseminating labor market information	3.6
Establishing STWO performance standards	3.5
Providing training for teachers, employers, mentors, counselors, others	3.4
Developing model curricula	3.3
Developing skill certificates	3.1
Developing assessment instruments	2.9
3. Promoting access and participation, total	**3.2**
Serve rural communities	3.6
Provide opportunities for all students to participate in STWO activities	3.5
Ensure opportunities for students with disabilities to participate	3.4
Ensure opportunities for school dropouts to participate	3.4
Ensure opportunities for young women to participate	3.3
Ensure opportunities for low-income students to participate	3.3
Ensure opportunities for low-achieving students to participate	3.3
Ensure opportunities for limited English proficient students to participate	2.8
Ensure opportunities for academically talented students to participate	2.8

* A five point scale was used to measure implementation activities with 1.0 equivalent to “not begun”, 2.0 equivalent to “planning”, 3.0 equivalent to “development”, 4.0 equivalent to “initial implementation”, and 5.0 equivalent to “advanced implementation”.

With regard to *state-level coordination*, states had convened state and regional planning boards and had begun coordinating with other school reform efforts. However, coordinating with *Goals 2000* activities was typically still in the development stage. With regard to *local activities*, states had formed local partnerships and had begun supporting their activities. However, most efforts to develop skill certificates and assessment instruments were in the development stage. Finally, with regard to *access and participation*, states were part way toward providing assistance to local partnerships to serve all students and to serve rural communities. In contrast, states were still between the planning and development stages with regard to providing assistance to local partnerships to ensure the participation of limited-English and academically talented students.

There may be several reasons why certain activities were less far along in implementation than others. For example, states may have considered some activities to be less of a priority for first-year implementation. Alternatively, states may have found that certain activities were considerably more difficult than others, requiring more planning or development time. However, all key activities related to coordination, local support, and access were, on average, at least in the planning stage.

Progress Toward Implementing STWO Components[8]

States were also asked to rank various activities that are part of the three STWO Act components: school-based learning, work-based learning, and connecting activities.

> *On average, states had developed plans and field-tested ideas and were on their way toward implementation of each of the three STWO components. Work-based learning activities were slightly further along toward implementation than were school-based learning activities. Connecting activities were furthest away from implementation.*

Although some differences in implementation status among work-based learning, school-based learning, and connecting activities were apparent, these differences were not remarkable.

Work-based learning activities may be further toward implementation because a number of these activities have been offered over the years through other programs and

[8]Since it is the local partnerships that will actually enroll students in STWO activities, the progress described in this section refers to states providing technical assistance to localities to offer STWO components.

initiatives. For example, the most well-established work-based learning activities according to the states were cooperative education (typically offered as part of vocational education programs) and registered and youth apprenticeships (typically offered as part of labor initiatives). At the other end of the spectrum, states reported that offering internships was generally still in the development stage.

Table 4

Implementation Status of STWO Activities: 1994–95	
Activity	**Rating***
1. Work-based learning activities, total	**3.7**
Offer cooperative education	4.4
Offer registered apprenticeships	4.0
Offer youth apprenticeships	3.9
Offer paid, high quality work-based learning experiences	3.8
Offer service learning	3.6
Offer unpaid work experiences	3.6
Offer school-sponsored enterprises	3.6
Offer job shadowing	3.5
Offer mentoring	3.5
Integrate school- and work-based learning into planned programs of study	3.5
Offer internships	3.3

* A five point scale was used to measure implementation activities with 1.0 equivalent to “not begun”, 2.0 equivalent to “planning”, 3.0 equivalent to “development”, 4.0 equivalent to “initial implementation”, and 5.0 equivalent to “advanced implementation”.

Table 4—Continued

Implementation Status of STWO Activities: 1994–95	
Activity	**Rating***
2. School-based learning activities, total	**3.5**
Offer a program of study that prepares students for postsecondary education	4.4
Offer a program of study that meets state academic standards	3.9
Regularly evaluate students	3.8
Offer career awareness, exploration, and counseling services	3.6
Offer school visits by persons in various occupations	3.6
Offer career majors	3.5
Provide linkages to further education	3.5
Integrate academic and occupational learning	3.4
Provide instruction in general workplace competencies	3.4
Provide instruction in all aspects of an industry	3.3
Establish skill standards	3.0
Offer skill certificates	2.6
3. Connecting activities, total	**3.2**
Provide assistance to STWO completers in making the transition to work or further education and training	3.6
Provide assistance to schools in providing STWO components	3.4
Match students with work-based learning opportunities	3.3
Link STWO participants with other community services	3.3
Evaluate outcomes of STWO participants	3.0
Link youth development activities with employer and industry strategies for upgrading workers' skills	2.9
Provide school site mentors	2.9

* A five-point scale was used to measure implementation activities with 1.0 equivalent to "not begun", 2.0 equivalent to "planning", 3.0 equivalent to "development", 4.0 equivalent to "initial implementation", and 5.0 equivalent to "advanced implementation".

School-based learning followed closely behind work-based learning. The most well-established school-based learning activities included offering programs of study that prepare students for postsecondary education and that meet state academic standards. Regularly evaluating students was also well established. At the other end of the spectrum,

offering skill certificates was between the planning and development stages, and establishing skill standards was still in development.

On average, none of the connecting activities mentioned in the Act had reached implementation. Providing STWO components and assisting STWO completers in making the transition to work or further education and training were the connecting activities that were furthest toward implementation. At the other end of the spectrum, evaluating STWO outcomes, providing school site mentors, and linking with employer and industry strategies for upgrading worker skills were still strictly in development.

I.C. SYSTEM BUILDING: STATE AND FEDERAL INVESTMENTS

An important objective of the STWO Act is to encourage states to support their school-to-work efforts with significant investments, so that when federal funds are no longer available, state STWO systems will be fully integrated and fully supported by state resources.

Performance measures were designed to explore the relationship between state and federal investments. States were asked about several kinds of investment activities:

- allocations of *new funds*, including new state appropriations or private contributions received in 1994–95 made specifically to support STWO system building and related state activities;

- allocations of *redirected funds* in 1994–95, including existing agency funds that have been earmarked specifically to support state-level STWO activities; and

- *in-kind contributions* received for STWO purposes by the state STWO office during 1994–95. In-kind contributions include such things as staff (that is, personnel made available for STWO efforts), office space, equipment and supplies, allocated by an agency to support state STWO activities.

Taken together, these three types of funds provide a basis for comparing state and federal investments.

All of the 8 states reported some difficulty estimating state agency investments in school-to-work. Estimating in-kind contributions was particularly difficult. Thus, the

estimates included in this report are conservative, and true state investments are likely to exceed these reported amounts. Nevertheless, states have successfully generated considerable investment in school-to-work.

During the initial grant cycle, the eight implementation states received federal grants totaling $43,000,000. The states reported total investments of state funds equaling $91,015,611.

These investments can be characterized in two ways:

1. Total initial federal grants allocated to the eight implementation states for the entire grant period can be compared with new, redirected, and in-kind funds made available by the states during 1994–95.

It is estimated that every dollar of federal STWO investment commitment over the entire grant period, has generated 2.1 dollars of state investment during 1994–95. This estimate is extremely conservative, because state investment data, especially data on in-kind contributions, are incomplete.

2. State and federal investments can be compared on an annualized basis, since none of the eight states utilized their entire federal funds allocation within the one-year measurement period 1994–95.[9]

During 1994–95 annualized, it is estimated that every dollar of federal investment has generated 3.2 dollars of state investment. Again, this estimate is extremely conservative for the reasons noted above.[10]

Sources of State Investment

New Funds. All eight states allocated some new funds for STWO efforts. These new funds ranged from less than 1 percent to 73 percent of each state's total STWO investments. Between 1 and 4 different agencies in each state provided new STWO allocations. New funds most often came from the K–12 education and state school-to-work offices.

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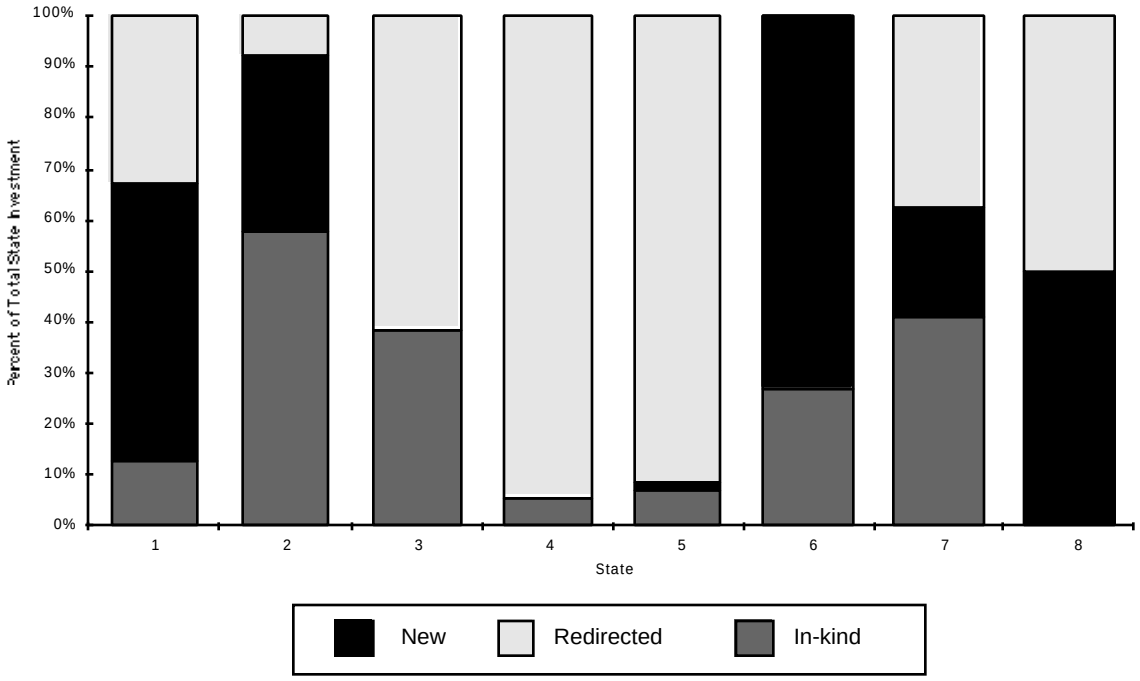
[9]All states received extensions beyond one year. Extensions ranged from as few as 3 months (that is, a total of a 15 month period), to as many as 12 months (that is, a total of a 24 month period).

[10]Annualized amounts are based on total federal grants received by each state, adjusted to reflect a twelve month period. Hence, for purposes of these calculations, if a state grant encompassed an 18 month period, 12÷18, or .67 of the total grant was assumed to be the annualized, federal grant.

Redirected Funds. All eight states redirected some funds for STWO purposes. Two states reported that 5 or more agencies provided redirected funds. In cases where only 1 or 2 agencies provided redirected dollars, those dollar amounts were substantial in relation to the total state investment. Redirected funds comprised between less than 1 percent and 94 percent of each state's total STWO investments. Redirected funds were most likely to have been received from the K–12 education, vocational rehabilitation, and job training agencies.

Figure 1
School-to-Work Investments in Eight States: 1994-95



In-Kind Contributions. As mentioned above, one reason why the estimate of "leveraged" state dollars is extremely conservative is that the states had considerable difficulty estimating in-kind contributions to the state STWO system-building effort. One state reported no in-kind contributions. With the exception of one state, which reported one source of in-kind funding, the others reported receiving in-kind allocations from between 9 and 12 agencies. Even so, these estimates were difficult to derive, and the states felt that they were significantly underreported. Among the seven states reporting in-kind estimates, these funds comprised between 6 percent and 58 percent of each state's total STWO investments. The most likely sources of in-kind support for STWO activities were K–12 education agencies, employment agencies, JTPA human resources investment councils, occupational information coordinating committees, and 2-year college agencies.

Table 5

Number of States Reporting Different Types of Investments, by Agency, 1994–95*

Agency	In-Kind	New	Redirected
State School-to-Work Office	4	4	2
Governors Office	1	0	1
State K–12 Education Agency	6	4	4
State Economic Development Agency	2	1	1
State Employment Agency	5	0	2
State Job Training Agency	2	2	3
State Vocational Rehabilitation Agency	4	2	3
JTPA Human Resources Investment Council	5	0	1
State Vocational Education Agency	3	1	2
State Council on Vocational Education	2	1	0
State Occupational Information Coordinating Council	4	0	1
State 2-Year College Agency	4	0	2
State Technical College Agency*	0	2	2
State 4-Year College Agency	3	0	0
State Human Services Agency	1	0	0
State Juvenile Corrections Agency	3	0	1
State Adult Corrections Agency	0	0	0
CBO's	3	1	2
Organized Labor	3	0	0
Employers	3	1	1
Trade Associations	1	0	0

*Found in 2 of 8 states

* Investments may have been reported as shared by more than one agency. In these instances, only one agency was credited with the contribution.

Summary

During 1994–95, states recognized that STWO system-building requires considerable state—as well as federal—investment. While the states are utilizing different investment strategies, emphasizing different combinations of new/redirected/in-kind allocations, substantial commitments are in evidence. Across the eight states, K–12 agencies were most likely to provide new, redirected, or in-kind contributions to the STWO state-level effort. State adult corrections agencies and human service agencies were least likely to be investing in state-level STWO activities. It can be anticipated that in the second

year, these state commitments will continue to grow relative to the federal contribution.

II. BASELINE PARTICIPATION

Since the eight states were in the first year of their grant cycle, and since local partnerships were just being formed, it was not possible to collect meaningful data on the participation of students or employers in local partnership activities. Hence, for purposes of baseline comparison in future years, 1994–95 performance measurement efforts focused on collecting data on existing systems, including describing current education and training providers, the participation of students in existing workforce preparedness programs, and the number and types of employers in the eight states.

II.A. BASELINE PARTICIPATION: THE CURRENT CONTEXT

The intent of the 1994 STWO Act is to promote the establishment of comprehensive, statewide school-to-work transition systems. These systems will build upon and bridge components of the current education and training system. For example, local partnerships may involve representatives of local educational agencies (school districts), local postsecondary educational institutions, local educators, employers, private industry councils, community-based organizations, and students, among other groups.[11] This section describes the size, structure, and composition of the current education and training systems in the eight initial implementation states, providing a context for current efforts to implement STWO reforms. The section also highlights implications of the data for the challenges states might face in establishing their STWO systems.

[11]See the STWO Act, Public Law 103-239, Section 4.11, for a definition of local partnerships.

Table 6

BASELINE PARTICIPATION PERFORMANCE MEASURES: 1994–95

(1) Number of schools and school districts in each state, by type

(2) Number of K–12 students in each state, by education level and demographic breakdown

(3) Number of postsecondary institutions in each state, by type

(4) Number of postsecondary students in each state, by type of institution and demographic breakdown

(5) Number of service delivery areas, community-based organizations, and other education and training providers in each state

(6) Number and percent of high school students participating in existing workforce preparedness programs, by demographic breakdown

(7) Number and percent of postsecondary students participating in existing workforce preparedness programs, by demographic breakdown

(8) Number of persons enrolled in existing workforce preparedness programs offered by other providers, by demographic breakdown

(9) Number of employers in each state, by size

(10) Average level of participation of employers in state-level system building

Elementary and Secondary Education

Public education in grades K–12 is typically administered through local school districts and delivered through the elementary/primary schools (grades K–6), middle/junior high schools (grades 7–8), and high schools (grades 9–12) in those districts.[12] While some STWO activities span grades K–12, certain key activities, such as career majors and work-based learning experiences, take place primarily during high school. Thus, the numbers of school districts and high schools in a state provides one indication of the potential scope of STWO systems. In the eight initial STWO implementation states, the number of school districts ranged from about 175 to 700, and the number of high schools ranged from about 175 to 900.

The numbers of school districts and high schools in the eight initial STWO implementation states are quite large, suggesting that it may take some time for states to "get to scale." These large numbers of local education providers also suggest that the character of STWO activities may vary significantly within as well as across states.

The STWO Act specifically targets school dropouts for school-to-work transition activities. The strategies states will pursue to reach these young people may vary substantially. Only some states (4 out of 8) reported data on dropout recovery programs for students who left the traditional K–12 school system before attaining a diploma.

As a large part of current workforce preparation activities for young people, vocational–technical education is offered in most "comprehensive" high schools in the country.[13] However, some states deliver vocational–technical education primarily through full-time vocational high schools or area vocational schools.[14] Two of the 8 initial implementation states reported operating full-time vocational high schools, and 5 reported operating area vocational schools, while one state operated both.

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[12]However, many variations on the typical model exist. For instance, some middle/junior high schools span grades 7–9, with associated high schools covering grades 10–12. Some schools (known as "combined schools") bridge two or more of the typical school types, for example, spanning grades K–8, 7–12, or K–12.

[13]"Comprehensive" high schools are the typical U.S. high school, focusing primarily on academic studies. (Some states refer to these as "academic" high schools.) National Assessment of Vocational Education, *Final Report to Congress* (Washington, D.C.: U.S. Department of Education, Office of Educational Research and Improvement, Office of Research, 1994) Volume II, chapter 1.

[14]Full-time vocational high schools offer academic studies, but focus on preparing students for work in a particular occupation or industry. Area vocational schools are regional facilities that students attend part of a day to receive their occupational training.

Since 6 out of the 8 states currently deliver vocational–technical education (at least in part) at sites that are separate from their comprehensive high schools, achieving some of the goals of the STWO Act may prove quite challenging. Specifically, integrating academic and occupational learning may prove difficult where vocational education has historically been physically isolated from academic education. Additionally, serving all students—including 4-year college-bound students—may prove challenging where participation in key STWO activities requires traveling from one school site to another.

The eight initial STWO implementation states represent about 20 percent of the public elementary and secondary student population in the United States.[15] The number of students in grades K–12 in the eight initial implementation states ranged from about 200,000 to over 2 and 1/2 million. The number of high school students ranged from about 65,000 to 650,000.

The large numbers of students in the eight initial implementation states will make it difficult to provide opportunities for all high school students to participate in high-quality work-based learning experiences. Although the number of students in the smallest and largest implementation states differed by a factor of 10, this factor was similar to the difference in the number of employers in these states (40,000 versus 440,000, see section II.C.). Thus, both small and large states will be similarly challenged to provide meaningful work-based learning experiences for their students.

Even if students were placed in a work-based learning situation only once during their high school years, about 40 percent of employers in each state would need to host 1 student per year. Alternatively, 10 percent of employers would need to accommodate an average of 4 students per year. This scenario would entail arranging approximately 16,000 to 160,000 placements per year, depending on the size of the state.

Postsecondary Education

Postsecondary education is generally delivered through 6 types of institutions: (1) public 4-year institutions; (2) public community colleges; (3) public vocational–technical institutes or technical colleges; (4) private, non-profit 4-year institutions; (5) private, non-

[15]National Center for Education Statistics, 1994, *Digest of Education Statistics* (Washington, D.C.: U.S. Department of Education, Office of Educational Research and Improvement).

profit less-than-4-year institutions; and (6) private for-profit institutions. Additionally, some area vocational schools serve postsecondary (and adult) students in addition to the high school students mentioned in the previous section.[16] All of the eight initial implementation states operate public 4-year postsecondary institutions. Six reported data for community colleges; 4 for public vocational–technical institutes or technical colleges; and 3 for area vocational schools serving postsecondary students.

The configuration of postsecondary institutions in each state varies considerably. Consequently, state strategies for creating secondary–postsecondary linkages and involving postsecondary institutions in their STWO systems will also vary.

The eight initial STWO implementation states represent about 19 percent of the public undergraduate postsecondary student population in the United States.[17] Among those states reporting student counts for the various institution types, the number of students attending community colleges surpassed the number attending public 4-year institutions by a small margin. The number of students attending public vocational–technical institutes and technical colleges equaled about one-third of the student populations at the former two institutions, and the number of postsecondary students served by area vocational schools was quite small. The number of students enrolled in private postsecondary institutions was about one-third the number of those enrolled in public postsecondary institutions in the eight initial implementation states.

Other Providers

In addition to the K–12 education system and the various postsecondary institutional systems, the Job Training Partnership Act of 1982 established Service Delivery Areas (SDAs) in each state through which employment-related training is provided to disadvantaged youths and adults. The administrative office of an SDA may provide JTPA programs and services directly, or may contract out to school districts, postsecondary institutions, community-based organizations, or other providers to do so. The reported number of SDAs in each of the eight states ranged from 3 to 33. Additionally, five states

[16]A distinction is commonly made between postsecondary students who take courses for credit toward a postsecondary degree or certificate and adult students who take noncredit courses.

[17]These states also represent about 30 percent of the private U.S. undergraduate postsecondary student population. National Center for Education Statistics, 1994, *Digest of Education Statistics* (Washington, D.C.: U.S. Department of Education, Office of Educational Research and Improvement).

were able to provide at least partial counts of the number of community-based organizations in their states.

II.B. BASELINE PARTICIPATION: STUDENTS

This section provides baseline information on student participation in existing workforce preparedness programs. These data provide a background against which future STWO participation data may be examined. For example, the proportions of high school and postsecondary students participating in existing workforce preparedness programs represent a benchmark against which to compare the extent of participation in STWO activities in the future. Beginning next year, performance measurement will focus on documenting student participation in local partnership activities.

Participation in Existing Workforce Preparedness Programs

States and localities currently operate a number of workforce preparedness programs. Many high schools, for instance, offer vocational education, cooperative education, school-sponsored enterprises, tech-prep programs, career academies, and youth apprenticeships. Many postsecondary institutions also offer vocational education, cooperative education, and continuation of tech-prep. Service Delivery Areas (SDAs)—and the Private Industry Councils (PICs) that oversee them—operate JTPA youth and adult programs. Depending on the state, either high schools, postsecondary institutions, or SDAs may offer noncredit adult education and adult vocational education programs. Additionally, unions sponsor employer-based registered apprenticeships and state corrections agencies offer programs for youths and adults. Among these many work-focused programs, five typically include a work-based learning component—cooperative education, school-sponsored enterprises, career academies, and youth and registered apprenticeships. The remaining programs rely primarily on classroom-based learning.[18]

Among the eight initial STWO implementation grant states, vocational education was the largest existing workforce preparedness program at both the high school and postsecondary levels.

[18]Cooperative education is typically offered as the work-based learning component of vocational education programs.

STWO offices reported that, on average, 28 percent of states' public high school students and 17 percent of states' postsecondary students were enrolled in vocational education.[19] Enrollments for vocational education were consistently higher than for all other workforce preparedness programs—except for noncredit adult education and adult vocational education—in each state that reported these data.[20]

At the high school level, cooperative education enrollments were typically a small fraction (about 2 percent) of total high school enrollments, while enrollments in tech-prep averaged about 8 percent of total high school enrollments. Additionally, five STWO offices reported at least some participation in youth apprenticeships in their states, although the absolute numbers of students participating in this activity were small (only two states exceeded 300 youth apprentices). Only two STWO offices reported participation data for school-sponsored enterprises, and one reported enrollments in career academies.

> *While significant segments of the high school populations in the eight implementation states participated in work-focused education (including vocational education), much smaller numbers of students participated in work-based learning experiences as represented by cooperative education, youth apprenticeships, school-sponsored enterprises, and career academies.*

A number of programs exist outside the K–12 and postsecondary education systems. For example, STWO offices reported between about 1,000 and 17,000 persons enrolled in registered apprenticeships in their states. The number of participants in JTPA programs ranged from about 9,000 to 60,000, with adult programs larger in some states and youth programs larger in others.

Tallying an overall count of the number of persons enrolled in existing workforce preparedness programs in the eight initial implementation states is not possible, because of

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[19]Wide disparities in enrollments were not due to differences in the size of states. Disparities were due in part to differing state emphases on vocational education. Further, a few states were only able to report partial enrollment counts (for example, for certain types of schools or institutions but not others), while other states provided more complete data. Finally, states tallied vocational education enrollments based on more and less restrictive definitions of program enrollment. For a more in-depth discussion of varying state data collection practices and definitions for vocational education, see E. Gareth Hoachlander and Karen A. Levesque, *Improving National Data for Vocational Education: Strengthening a Multiform System* (Berkeley: University of California, National Center for Research in Vocational Education, 1993) pp. 81–103.

[20]Although the numbers of persons enrolled in noncredit adult education and adult vocational education programs appeared to be larger than those enrolled in for-credit vocational education programs, there were insufficient data to draw this conclusion (not all states reported adult education and adult vocational education counts).

missing data and the potential for duplicating enrollments. For example, most students who participate in cooperative education, school-based enterprises, and tech-prep are also simultaneously enrolled in vocational education programs. While it may be unlikely that students enroll simultaneously in programs offered in the different sectors (high school, postsecondary, industry, etc.), it is generally not possible to verify that this does not occur. While programs may keep records for their own participants, it is rare that programs feed into a single database. Furthermore, cross-referencing enrollment data to eliminate duplication requires obtaining a unique identifier from participants, such as a social security number, which is not standard practice for all programs.

II.C. BASELINE PARTICIPATION: EMPLOYERS

A stated purpose of the 1994 STWO Act is to "utilize workplaces as active learning environments in the educational process by making employers joint partners with educators in providing opportunities for all students to participate in high-quality, work-based learning experiences." The Act envisions employers as key players in STWO systems, particularly as providers of work-based learning experiences at the local level. The performance measurement data for 1994–95 provide preliminary information about the population of employers in the eight initial implementation states; their participation in system-building activities at the state level; and state-level efforts to involve employers in local STWO activities. Information on the involvement of employers in local partnerships will be available from performance measurement data beginning in 1995–96.

Scope

The eight initial STWO implementation states were home to between about 40,000 and 440,000 employers each.[21]

The vast majority of these were small employers with fewer than 100 employees. On average, the states also housed several thousand medium-sized employers (with between

[21]The numbers cited include only those employers covered by the states' unemployment insurance systems. Employers typically not covered by these systems include federal and state governments, railroad companies, small agricultural businesses, independent contractors, and self-employed persons. Additionally, these numbers count central offices rather than sites, so the number of workplaces likely exceeds the number of employers reported here. See Karen A. Levesque and Martha Naomi Alt, *A Comprehensive Guide to Using Unemployment Insurance Data for Program Follow-Up* (Berkeley: Institute for the Study of Family, Work, and Community) July 1994.

100 and 1,000 employees) and several hundred large employers (with over 1,000 employees). These high, initial numbers suggest great potential for involving employers in STWO activities, although the number of employers who are both willing and able to offer "paid, high-quality" work-based learning experiences for young people is unknown.

Participation in System Building

> *All eight initial implementation states reported some participation on the part of employers in state-level system-building activities during 1994–95.*

However, the level of employer activity varied across states. Three states reported a high level, three reported a moderate level, and two reported a low level of employer involvement in system-building activities. In addition to involving individual employers, three states reported a moderate to high level of participation on the part of various employer associations in their system-building efforts.

At the state level, employers contributed to system-building efforts by sitting on advisory councils, participating in statewide STWO conferences, and helping to develop industry skill standards. Additionally, three states reported that employers made monetary contributions to state-level STWO efforts.

Implementation Activities

> *On average, states had developed plans and field-tested ideas and were moving toward implementing strategies to involve employers in local STWO activities. Efforts to recruit employers to provide work-based learning experiences were slightly further along toward implementation than were efforts to provide assistance to local partnerships to encourage active business involvement. Efforts to provide assistance to local partnerships to help employers offer STWO components were furthest away from implementation.*[22]

Since states needed several months after receiving their STWO grants to begin establishing local partnerships, it is not surprising that state-level efforts to recruit employers were further along than state efforts to assist local partnerships in doing so. Additionally, it is

[22]On a 5.0-point implementation scale (with 3.0 equivalent to "in development" and 4.0 equivalent to "initial implementation") recruiting employers to provide work-based learning, providing assistance to local partnerships to encourage active business involvement, and providing assistance to local partnerships to help employers implement STWO components scored 3.8, 3.5, and 3.3, respectively.

reasonable that encouraging active business involvement at the local level should precede helping employers implement specific STWO components. Nevertheless, these various efforts to involve employers in local STWO activities did not differ substantially in terms of their implementation status. States appear to have made progress in each area during 1994–95.

Employers are to be key partners with educators in establishing STWO systems. Initial performance measurement data indicate that both individual employers and employer associations were involved in state-level system-building activities during 1994–95 and that states took several steps toward involving employers at the local level, where student participation in STWO components will occur. Finally, the large numbers of employers in each of the eight initial implementation states suggests great potential for involving employers in STWO systems, although recruiting sufficient numbers of employers who are both willing and able to provide high quality, work-based learning experiences may present a significant challenge.

III. BASELINE STUDENT OUTCOMES

Since local STWO activities were just getting underway during 1994–95, it was not possible to collect outcome data for students participating in them. Instead, 1994–95 efforts assessed the current capacity of the first eight state grantees to provide student outcome data in the areas identified in the Act. Outcome data for students in local STWO partnerships and activities will be collected in future years.

Table 7

BASELINE STUDENT OUTCOMES PERFORMANCE MEASURES: 1994–95

(1) Average high school achievement test scores and gains, by subject area

(2) High school graduation rate

(3) Percent of high school graduates attaining a skill certificate

(4) Percent of high school graduates entering (i) employment or the military, (ii) related employment, (iii) further education or training, and (iv) related education or training

(5) Percent of high school graduates attaining a postsecondary degree or certificate

(6) Percent of high school students completing existing workforce preparedness programs

(7) Percent of postsecondary students completing existing workforce preparedness programs

(8) Percent of targeted populations completing other workforce preparedness programs (such as JTPA or registered apprenticeships)

Inventory of Student Outcome Data

The first-year inquiry raised some important issues. There were considerable differences among the 8 implementation states in terms of the availability of these kinds of data. For example, while most states (6 out of 8) were able to calculate the high school

graduation rate, only three reported statewide standardized achievement test scores,[23] and three reported rates of placement of high school graduates into employment or further education and training.[24] Furthermore, the basis of data calculations varied from state to state. For example, the states reporting high school graduation rates calculated those rates in different ways: two calculated graduation rates for the cohort of students who entered first grade twelve years before; two calculated these rates for the cohort of ninth graders enrolled four years before; and two calculated these rates for seniors enrolled in high school in the fall of senior year. Additionally, states reporting achievement test scores did so for different standardized tests. Gathering outcome data that are strictly comparable across the states will be next to impossible, especially since the pool of implementation states has increased from 8 to 27.

> *While the Act proposes a particular set of outcomes, most states do not now have the capacity to generate data of these sort. Measuring outcomes defined in the Act will necessitate considerable investment in management information and related data collection and analysis systems. It will also be the case that until substantial numbers of students are involved in local programs, there should be little expectation that linkages will be found between these STWO measures and the kinds of outcomes defined in the Act.*

IV. DISCUSSION

This final section of the report notes a series of issues pertinent to the elaboration of the performance measurement strategy in future years. These questions are posed for consideration:

- What data should be collected? What should be measured? How can the performance measurement system be responsive to state- and local-level program improvement agendas as well as national data reporting needs?

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[23]Two additional states reported scores on alternative assessments. The remaining three states reported scores from the Scholastic Aptitude Test (SAT), which measures college *aptitude* and is not a valid indicator of student *achievement.* Moreover, because students elect to take the SAT test, it does not reflect performance for the entire student population.

[24]Two of the three states reported data on students' *intentions* for after high school. Only one of the eight states reported *actual* follow-up data.

- Who should collect the performance measurement data?
- What management information system (MIS) issues need to be considered as future plans are discussed?

Ultimately, one objective of performance measurement efforts must be to develop a sustainable data collection system that will support state and local school-to-work efforts beyond the life of the Act.

What Should Be Measured?

As the National STWO Office and state implementation grantees continue to phase in a performance measurement system for school-to-work, they must keep in mind the twofold purpose of these systems: (1) meeting national reporting needs; and (2) supporting state program management and improvement needs. Balancing these differing information needs presents a definite challenge. Moreover, state STWO strategies differ enough that state information needs may vary considerably. Ultimately, the National STWO Office may designate a core set of performance measures that all states report, while states may augment this core to satisfy their unique information needs.

A clear direction for the content of such a performance measurement core is the Act itself. As noted in the introduction to this report, the Act defines specific elements of a performance measurement system. While at least some information on the three key areas implied by the Act—system building, participation, and outcomes—was accessible, performance measurement efforts during 1994–95 demonstrated that many specific data elements were not. Before plunging ahead with filling in the gaps, a larger issue must be addressed: *Are these the aspects of performance that are most appropriate to measure?*

Many advocates and critics of performance measurement or indicator systems caution that such systems should be rooted in explicitly defined goals:[25] What is it we are striving

[25]For example, see: (1) Aimee L. Franklin and Carolyn Ban, "The Performance Measurement Movement: Learning from the Experiences of Program Evaluation," a paper prepared for the American Evaluation Association Annual Meeting in Boston, MA, 1994; (2) David Osborne and Ted Gaebler, *Reinventing Government* (Reading, MA: Addison-Wesley Publishing Company, Inc., 1992); (3) Jane L. David, "The Use of Indicators by School Districts: Aid or Threat to Improvement?" (*Phi Delta Kappan* 69 (7): 499–503, March 1988); and (4) Andrew Porter, "Indicators: Objective Data or Political Tool?" (*Phi Delta Kappan* 69 (7): 503–508, March 1988).

to achieve? How best can we measure progress toward these goals? With expansion of the STWO initiative from 8 to 27 states, the National STWO Office and state implementation grantees have agreed to develop common STWO goals (or benchmarks) and to root performance measurement for 1995–96 and beyond in these goals. While this effort represents a positive step toward ensuring the appropriateness of selected performance measures, it raises several potential challenges. First, goals may vary considerably among the different stakeholders, including the National Office and the 27 state grantees, and decisions will need to be made about what data all states will collect and report. Second, the agreed upon core of performance measures may differ significantly from the data elements prescribed in the Act, and the National Office will need to decide how to handle the disparities.

Ultimately, a primary objective of STWO performance measurement efforts is to build an information system that will sustain itself beyond the life of the Act. This implies that (1) the measured elements need to be recognized by the states for their information value; and (2) the measured elements must reflect state STWO priorities. Balancing these requirements with immediate national data needs may prove difficult indeed. However, the future direction of the performance measurement system rests on the degree to which performance measures will be able to fulfill both national and state information needs. All things considered, a sustainable system of indicators supporting state and local school-to-work efforts may require a substantially different set of measures in 1995–96 and beyond from those that were collected in 1994–95.

A possible starting point for selecting appropriate performance measures for 1995–96 is illustrated on page 34. This table describes possible performance measures for two of the key areas identified in this report: system building and participation. Since many local partnership activities will only get underway during 1995–96, outcome measures may need to be phased in even later, perhaps beginning in Year 3. Moreover, while the outcomes identified in the STWO Act seem to be a reasonable starting point, the problems highlighted in section III of this report indicate that they may not be feasible to collect. Consequently, substantial attention will need to be paid to selecting appropriate and feasible outcome measures in future years.

Who Should Collect These Data?

There is reason to reconsider the appropriate mechanism for collecting performance measurement data. The first-year experience placed a significant burden on the small staffs

in state STWO offices. These staff are working hard to build their state systems and to begin the process of providing support to their local partnerships. The data collection activities associated with the first-year report proved substantial, requiring significant time commitments from the state staff. To gather some data points (for example, data enumerating participation in existing workforce preparedness programs), state STWO offices had to request information from other agencies that collect, monitor, or otherwise manage these data. The state STWO offices were placed in the difficult position of having to identify appropriate sources of data, engage those sources to obtain available data, and often, interpret the data to determine whether they met STWO performance measurement needs.

Equally important, an effort must be made to develop a process whereby the disparate pieces of data that will ultimately comprise the performance measurement system can be managed by the state STWO office. At this time, there is no single or coordinated state database capable of delivering all school-to-work performance measurement data, and until such an effort is made, it may be exceedingly difficult for state STWO offices on their own to meet data gathering needs. State data collection and management will prove to be even more problematic as measurement strategies are expanded in future years to include data collected from the local partnerships.

Hence, *it is recommended that there be careful discussion of the appropriate "location" and strategy for managing the school-to-work data collection function* in order to reduce burden, to optimize access to data sources, and to provide the best information available within each state. Ultimately, it may be attractive to locate this function within the state STWO office, although an appropriate support structure would have to be developed.

Possible Plan for STWO Performance Measures for Year 2 (1995–96)

Year 2 (1995–96)		
System Building	**Participation**	**Outcomes***
(1) Average number of partners collaborating in local partnerships, by type of constituency	(1) Percent of schools and school districts participating in local partnerships	
(2) Average level of participation in local system-building activities, by type of constituency	(2) Percent of K–12 students who are in local partnership schools, by demographic breakdown	
(3) Average stage of implementation of selected local partnership activities, including coordination and recruitment efforts and promoting access and participation	(3) Percent of postsecondary institutions participating in local partnerships	
(4) Average stage of implementation of the three STWO program components (school-based learning, work-based learning, and connecting activities)	(4) Percent of postsecondary students who are in local partnership institutions, by demographic breakdown	
(5) Total amount of funds invested by local partners in STWO activities, including new and redirected funds and in-kind contributions	(5) Percent of service delivery areas and community-based organizations participating in local partnerships	
(6) Leveraging factor comparing combined state and local investments with federal investments, based on total and annualized investments	(6) Percent of high school students participating in selected STWO activities, by demographic breakdown	
	(7) Percent of postsecondary students participating in selected STWO activities, by demographic breakdown	
	(8) Percent of other persons participating in selected STWO activities, by demographic breakdown	
	(9) Percent of employers participating in local partnerships, by size	

* Because many local partnership activities will only get underway during 1995–96, outcome measures should be phased in during Year 3 or later.

Management Information and Performance Measurement System Constraints and Comparability

The process of gathering material for this document has raised a number of issues, some well known and documented, others unique to school-to-work, involving state-level management information and data systems. Without establishing a system of data collection that is common to all STWO states—an effort that would involve a significant commitment of resources—data related to school-to-work activities will necessarily derive from existing data systems. However, relying primarily on existing data systems and data collection practices places constraints on the data that states are able to collect and report. For example, some states do not currently have the capacity to report information on the demographic characteristics of students participating in various workforce preparedness programs. While most are able to report counts of male and female students and of students from different racial–ethnic groups, the capacity of states to report information on the limited English proficiency, socioeconomic status, disability status, and academic disadvantage or talent of students varies widely. Although the STWO Act calls on the performance measurement system to report on participation and outcomes for these different groups, state management information and data systems are currently limited in their capacity to do so.

Additionally, data elements are often not comparable across the states. For example, data reported by the STWO states on student enrollments in vocational education programs varied widely (between 10 and 47 percent of students at the high school level) due largely to differences in definitions of "program enrollment."[26] Modifying these data elements would require changing established procedures in agencies that are not directly accountable to the federal STWO initiative or that also serve non-STWO data needs. *Thus, it is recommended that careful attention be given during preparation of 1995–96 performance measures to exploring the need for, utility of, and feasibility of creating a STWO data collection system that contains common elements across the states.*

[26]Some states count only those students enrolled in occupationally specific courses above the introductory level, while others count students enrolled in all vocational courses, including general labor market preparation and consumer and homemaking education courses. Furthermore, some states count individual students, while others count course enrollments, including students more than once if they take more than one vocational course in a single year. See E Gareth Hoachlander and Karen A. Levesque, *Improving National Data for Vocational Education: Strengthening a Multiform System* (Berkeley, CA: National Center for Research in Vocational Education, 1992).

Conclusion

Evidence across the three measured domains—system building, participation, and outcomes—indicates that substantial progress was made during 1994–95 in garnering state investment in school-to-work and in building STWO systems in the eight states that received implementation grants. Specifically, these data indicate that the level of interagency collaboration in system building surpassed legislative guidelines, although some variation existed across states in the particular mix of agencies involved and in the particular roles that collaborating agencies played. In addition, the data indicate that states have made progress toward implementing the three STWO components (work-based learning, school-based learning, and connecting activities) and were beginning to implement strategies related to state-level coordination, supporting local activities, and promoting access and participation. However, the status of specific strategies within each of these areas varied considerably. Finally, state-level data pertinent to the outcomes specified in the Act are available only to a limited degree. Management information systems in the states are, generally, not well equipped to provide the kinds of data required to support the focal outcome areas proscribed in the Act.